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## Recent Numerical Advances in Fluid Mechanics

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### Message from the Guest Editor

Dear Colleagues,

In recent decades, the field of computational fluid dynamics has made significant advances in enabling advanced computing architectures to understand many phenomena in biological, geophysical, and engineering fluid flows. Almost all research areas in fluids use numerical methods at various complexities: from molecular to continuum descriptions; from laminar to turbulent regimes; from low-speed to hypersonic, from stencil-based computations to meshless approaches; from local basis functions to global expansions, as well as from 1st-order approximation to high order and spectral accuracy. Many successful efforts have been put forth in dynamic adaptation strategies, e.g., adaptive mesh refinement and multiresolution representation approaches. Furthermore, with recent advances in artificial intelligence and heterogeneous computing, broader fluids community has gained momentum to revisit and investigate such practices. In this Special Issue, we aim to bring together researchers to provide a state of the art overview of the current investigations and topics on computational fluid dynamics.

Dr. Omer San  
*Guest Editor*



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# Special Issue



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## Message from the Editor-in-Chief

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